MULTI-SAMPLE FERMENTOR AND METHOD OF USING SAME

ABSTRACT OF THE DISCLOSURE

A fermentation apparatus is constructed to produce a known and repeatable amount of untainted fermentation product using multiple fermentation vessels. To facilitate further processing compatible with other product processing steps, the fermentation apparatus has an array of sample vessels arranged in a container frame. The container frame is configured to hold the sample vessels during fermentation and to transport the vessel array to or from another processing station. Corresponding to the number of sample vessels in the sample vessel array, a cannula array is configured such that each cannula may be placed inside a sample vessel. The cannula array is attached to a gas distributor that delivers oxygen and/or one or more other gases from a gas source through the cannula into the sample vessel. Because the fermentation volume for each individual sample vessel is smaller than a bulk fermentation apparatus, the fermentation product yields are predictable and cell growth rates can be effectively optimized.